PATENT COOPERATION TREATY

REC'D 06 JUL 2004
WIPO PCT

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PREPULSE	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FI 03/00254	International filing date *(day/month/year)* 03.04.2003	Priority date *(day/month/year)* 03.04.2002
International Patent Classification (IPC) or both national classification and IPC C07D215/00		
Applicant ORION CORPORATION et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
30.10.2003	05.07.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Bérillon, L Telephone No. +49 89 2399-7078

Form PCT/IPEA/409 (Cover Sheet) (January 2004)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/FI 03/00254

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-7 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

   ☐ the entire international application,

   ☒ claims Nos. 1-15 (part)

   because:

   ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

   ☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

   ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

   ☒ no international search report has been established for the said claims Nos. 1-15 (part)

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

   ☐ the written form has not been furnished or does not comply with the Standard.

   ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	3-6, 8, 11-13
	No:	Claims	1,2, 7, 9, 10, 14, 15
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-15
Industrial applicability (IA)	Yes:	Claims	1-15
	No:	Claims	

2. Citations and explanations

see separate sheet

Item III

Only part of the claims in respect of which an International Search Report has been established will be examined (Rule 66.1(e) PCT) i.e. only part of claims relating to the alpha-2c antagonists cited in the description useful for treating diseases or symptoms according to claims 1-15.

Item V

1 Prior art

Reference is made to the following document:
D1: WO 01 64645

2 Novelty (Article 33(2) PCT)

D1 discloses the use of alpha-2c adrenoceptor antagonists such as acridin-9-yl-[4-(4-methylpiperazin-1-yl)phenyl]amine (see example 1, page 21) for the treatment of Parkinson's disease and schizophrenia (see page 39, line 29 to page 40 line 7). Accordingly, claims 1, 2, 7, 9, 10, 14 and 15 which relate to psychotic cognitive impairment, Parkinson disease and schizophrenia lack novelty.
Novelty is not affected by the further prior art documents cited in the international search report which do not disclose any alpha-2c antagonists cited in the description.

3 Inventive step (Article 33(3) PCT)

The technical problem underlying the present application lies in the provision of a medicament for the treatment of various diseases wherein the symptom are hallucination, delusion, parathymia etc. (see claims 2-12). Said problem has been addressed in the present application with the provision of acridin-9-yl-[4-(4-methylpiperazin-1-yl)phenyl]amine which enhances the prepulse-inhibition of startle reflex (see figure 1B). It is however noted that said acridin-9-yl-[4-(4-methylpiperazin-1-yl)phenyl]amine is already disclosed in D1 as being an alpha-2c adrenoceptor antagonists useful for the treatment of schizophrenia (see D1, page 39, line 35). Accordingly, part of the claimed subject matter which relate to symptoms of

schizophrenia such as claims 3-6 and 8 is anticipated by D1 and cannot be considered as an inventive solution of the above defined technical problem. For part of the claimed subject-matter which relates to diseases not disclosed in D1 (Tourette's symdrom, blepharospasm, focal dystonias etc.) there seems to be no basis for inventive step at present since no evidence can be found in the present application that acridin-9-yl-[4-(4-methylpiperazin-1-yl)phenyl]amine is effective in the treatment of said diseases.